27598
S/049/61/000/009/002/004
Magnetron systems of transforming ...   D214/D304

It is stated in conclusion that the magnetron systems have a rela-
tively high sensitivity (1-2 micro-amp -- micron current sensiti-
vity and 15-50 mV/micron voltage sensitivity) which is independent
of the oscillations period. They can be used for registering seis-
mic earth crust displacements. Small dimensions and simplicity
permit their use in new seismograph constructions. The magnetron
systems can be used for transducing seismic oscillations into vol-
tage, current or high frequency at the output; this versatility
makes it possible to extend considerably the possibility of recor-
ding and the further amplification of seismic oscillations. With
the help of magnetron systems it becomes comparatively easy to
realize the cathode ray tube, galvanometric and magnetic methods
of recording of seismic waves. There are 4 figures, 3 non-Soviet-
bloc and 6 Soviet-bloc references. The references to the English-
language publications read as follows: P.C. Gane, An electrostatic
seismometer, Bull. Seism. Soc. Amer. 38, no. 2, 1948; J.A. Volk,
The electronic seismograph Bull. Seism. Soc. Amer. 4o, no. 2, 1950.

Card 2/4

Magnetron systems of transforming ...

27598
S/049/61/000/009/002/004
D214/D304

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A.A. Zhdanova (Leningrad State University im. A.A. Zhda-nov)

SUBMITTED: March 18, 1961

Card 4/4

29869
S/169/61/000/009/011/056
D228/D304

9.9865 (also 1327)

AUTHORS: Lin'kov, Ye. M., and Savarenskiy, Ye. F.

TITLE: Device for registering the trajectory of movement
                during microseismic vibrations

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 9, 1961, 13,
                abstract 9A104 (V sb. Seysmich. issled. no. 4, M.,
                AN SSSR, 1960, 133-137)

TEXT: A device is described, by means of which the horizontal tra-
jectories of the movement of particles of the earth's surface during the
passage of microseisms are converted into electron-pencil vibrations in
an electron-ray tube. If stormy microseisms represent on the whole Ray-
leigh waves, then straight lines or elongated ellipses—whose long axes
are directed, like the straight lines, to the region of microseismic
stimulation—are drawn on the tube's screen. The device has two identical
channels for the two components; each channel contains a preliminary and
a final intensifier. Observations made by means of the described device

Card 1/2

Device for registering...

29869
S/169/61/000/009/011/056
D228/D304

𝒱

at Pulkova showed that at the time of microseismic storms the trajectories
are principally elongated in a NW direction. /Abstracter's note: Com-
plete translation./

Card 2/2

LIN'KOV, Ye.M.

Magnetron systems for the conversion of seismic oscillations into
electric oscillations. Izv. AN SSSR. Ser. geofiz. no.9:1373-1376
                                                    (MIRA 14:9)
S '61.

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.
                        (Seismometry)

S/785/61/000/010/001/002

AUTHORS: Lin'kov, Ye. M., Hsiao Wei-Wen'.

TITLE: Magnetron transducers for seismic oscillations.

SOURCE: USSR. Ministerstvo geologii i okhrany nedr. Osoboye konstruktorskoye
          byuro. Geofizicheskoye priborostroyeniye. no. 10. Leningrad, 1961,
          35-44.

TEXT: The paper describes the operating principle, design, and performance
of highly sensitive magnetron transducers, with particular application to the seismo-
graph constructed by D. P. Kirnos. The magnetron transducer transforms seismic
oscillations into electric oscillations by means of the modulation of an electron flux
by an external magnetic field within the magnetron. The trajectories of the electrons
are more or less curved, depending on the intensity of the magnetic field, whereupon
some electrons hit and other miss the anode. A simple magnetron may consist of a
straight cylindrical cathode and a coaxial cylindrical anode aligned with a permanent
magnetic field. Modulation can be achieved either by relative displacement of the
magnetron with respect to the magnetic-field source (solenoid, permanent magnet)
or by magnetic-field variations. An electron contained in the magnetron is affected
by both the electric and the magnetic field; the practically most important configur-
ation is that of a mutually perpendicular arrangement of the fields. Disregarding
edge effects and assuming the absence of a space charge near the cathode, expressions
Card 1/2

Magnetron transducers for seismic oscillations.   S/785/61/000/010/001/002

for the position of an electron at a time t are obtained which define the trajectory of
the electron as a cycloid which, without a magnetic field,.degenerates to (radial)
straight lines, and which, beyond a certain critical magnetic-field strength, H_{crit},
becomes too sharply curved to reach the anode, whereupon the diode flux drops sharp-
ly. Expressions for the critical field strength are derived for flat and cylindrical
diodes. For commercially available pentodes the critical field strength is 100 to
350 oe. In real pentodes the anode-current drop-off is not sudden, but gradual, and
there is an "effective magnetic field," H_{eff}, which corresponds to the minimal
anode current. The fact that, for values of H below H_{eff}, the slope of the anode-
current-vs.-H curve is negative and that of the grid-current-vs.-H curve is positive,
permits the construction of a magnetron transducer with push-pull output, which is
especially helpful in galvanometric recording. The circuitry and amplitude character-
istics of typical transducers are shown, and the existence of a fairly extended linear
portion of the curve is ascertained, which ensures an undistorted registration of
seismic oscillations. There are 5 figures and 7 references (1 Soviet: Lin'kov, Ye.
M., et al., AN SSSR, Izv., ser.geofiz., no.2,1961; 5 English-language, including
Gouin, P., Annales de géophysique, no.3, 1957, 13; 1 French-language).

ASSOCIATION: None given.

Card 2/2

S/703/62/000/303/001/001
A061/A126

AUTHORS: Lin'kov, Ye.M., Tripol'nikov, V.P., Sabantsev, S.B.

TITLE: Seismic polarization devices

SOURCE: Leningrad. Universitet. Uchenyye zapiski, no. 303. Seriya fizi-
             cheskikh i geologicheskikh nauk, no. 13, 1962. Voprosy geofiziki,
             135 - 136

TEXT: A device developed at the Kafedra zemnoy kory LGU (Department of
Lithosphere Physics of LGU) makes it possible to observe particle motion in se-
ismic waves in the horizontal plane by resorting to relatively simple means.
Seismic or microseismic waves are measured by two horizontal seismographs mount-
ed at an angle of 90° to each other. Signals are fed to two identical amplifi-
ers, and the amplified oscillations are observed on the screen of a cathode-ray
oscilloscope. Two versions have been worked out. The former, designed for the
recording of earthquake waves, consists of a two-stage 12Ж1Л (12Zh1L) tube
amplifier working with microcurrents. The very moment when earthquake waves ap-
pear the device is switched on. The other version has a larger amplification

Card 1/2

S/703/62/000/303/001/001
A061/A126

Seismic polarization devices

factor, and is intended for the recording of microseismic waves during storms.
The amplifier consists of an a-c stage with transformer, and of a d-c stage.
The oscillations are recorded by a loop oscillograph. There are 2 figures.

Card 2/2

LIN'KOV, Ye.M.; SYAO VEY-VEN'

Magnetron converters of seismic vibrations. Geofiz. prib. no.10:
35-44 '61.   (MIRA 15:3)
                                    (Seismometers)

LIN'KOV, Ye.M.; TRIPOL'NIKOV, V.P.; SABANTSEV, S.B.

Polarization of seismic units. Uch.zap.LGU no.303:135-137 '62.

(MIRA 15:11)

(Seismometers)

LIN'KOV, Ye.M.

Practice of tracking cyclones from observations of microseisms on
a polarized unit. Uch.zap.LGU no.303:138-145 '62.   (MIRA 15:11)
            (Microseisms)   (Cyclones)

LIN'KOV, Ye.M.; TRIPOL'NIKOV, V.P.

Some results of observations of microseisms using a polarized
apparatus and a three-point station. Izv. AN SSSR. Ser.
geofiz. no.11:1562-1566 N '62.   (MIRA 15:11)

1. Leningradskiy gosudarstvennyy universitet im. A.A. Zhdanova.
                    (Seismic waves)

LIN'KOV, Ye.M., kand.fizikc-matem. nauk; SMIRNOV, V.A., inzh.

Development and testing of a tiltmeter. [Trudy] VNIMI   no.49:
84-89 '62.   (MIRA 17:4)

1. Leningradskiy gosudarstvennyy universitet (for Lin'kov).
2. Vsesoyuznyy nauchno-issledovatel'skiy marksheyderskiy
institut (for Smirnov).

L 19034-63   EWT(1)/BDS   AFFTC/ESD-3   TF

ACCESSION NR: AP3007666   S/0049/63/000/009/1357/1360

AUTHOR: Lin'kov, Ye. M.

TITLE: Long-period magnetron seismograph

SOURCE: AN SSSR. Izvestiya. Seriya geofizicheskaya, no. 9, 1963, 1357-1360

TOPIC TAGS: magnetron seismograph, long period seismograph, feed-back device, electrodynamic converter, seismograph frequency characteristic

ABSTRACT: The Kafedra fiziki zemnoy kory* (Department of Physics of the Earth's Crust), Leningrad State University, has devised a method by which a long-period seismograph can be constructed without using a long-period galvanometer. Based on the application of the positive feedback between the electrodynamic converter and the converter reacting to pendulum deviations, this method makes it possible to change the frequency of the pendulum within a wide

Card 1/2

L 19034-63

ACCESSION NR: AP3007666

range and to increase instrument magnification by several times.
The method has been used to increase the efficiency of the verti-
cal pendulum of the Kirnos seismograph (improved version by V. T.
Arkhangel'skiy), tuned to a 9-sec natural-oscillation period and
equipped with a magnetron converter. The new seismograph has been
installed at the "Simferopol" seismic station and used to record
several earthquakes. The feedback principle is illustrated in
Figs. 1-3 of the Enclosure. The frequency characteristics of
long-period seismographs are given in Fig. 4. Surface waves re-
corded with this equipment during an Iranian earthquake are shown
in Fig. 5. "The work was carried out on the initiative and under
the supervision of Ye. F. Savarenskiy, to whom the author ex-
presses his sincere appreciation." Orig. art. has: 5 figures.

ASSOCIATION: Leningradskiy gosudarstvenny*y universitet im. A. A.
Zhdanova (Leningrad State University)

SUBMITTED: 22Dec62   DATE ACQ: 14Oct63   ENCL: 04

SUB CODE: AS   NO REF SOV: 001   OTHER: 000

Card 2/2

LIN'KOV, Ye.M.; LIN'KOV, A.M.

     Positive feedback in a seismograph circuit. Geofiz. prib. no.15:
     129-134 '63.   (MIRA 17:4)

LIN'KOV, Ye.M.

Use of magnetron transformers in seismic detectors and tiltmeters.
Uch. zap. LGU no.324:147-154 '64.   (MIRA 18:4)

LIN'KOV, Ye.M.; TRIPOL'NIKOV, V.P.

Apparatus and methods for studying motions due to microseisms.
Uch. zap. LGU no.324:142-146 '64.   (MIRA 18:4)

LIN'KOV, Ye.M.; SMIRNOV, V.A.; VINOKUR, B.Sh.

Tiltmeter studies of rock bursts. Uch. zap. LGU no.324:155-161 '64.
(MIRA 18:4)

L 13844-66   EWT(1)/EWA(h)   GW

ACC NR: AR6000812   SOURCE CODE: UR/0169/65/000/009/G017/G017

SOURCE: Ref. zh. Geofizika, Abs. 9G141

AUTHOR: Lin'kov, Ye. M.; Tripol'nikov, V. P.

TITLE: Data on motion for the case of microseismic waves

CITED SOURCE: Sb. Seysmich. issledovaniya. No. 6. M., Nauka, 1965, 48-59

TOPIC TAGS: microseism, seismic wave, seismography, Rayleigh wave

TRANSLATION: The authors describe equipment and methods used for observing the tra-
jectories of particles in microseismic waves in the horizontal plane. Use is made
of two identical Kirnos seismographs placed perpendicular to one another and a 2-
channel polarization unit with amplification channel. The amplification factor is
10^6. The observations were made visually and with the use of motion picture equip-
ment. Parallel observations were made by a triple microseismic station in Pulkovo.
The recordings of both installations were used for plotting the complete vector for
motion of the microseismic vibrations in space, comparing the azimuths at the source,
and calculating the angle of inclination to the horizontal for the full vector of

Card 1/2   UDC: 550.342

L 13844-66

ACC NR: AR6000812

motion for waves elliptically polarized in the horizontal plane. The results show
that the microseisms consist of pseudo-Rayleigh and pseudo-Love waves and of waves
polarized in the vertical and horizontal planes.

SUB CODE: 08

Card 2/2

SHKOL'NIK, R.Ya.; DOMAN, N.G.; SPEKTOROV, K.S.; LIN'KOVA, Ye.A.

Insoluble products of photosynthesis of a synchronous culture
of Chlorella pyrenoidosa at various stages of development.
Fiziol.rast. 12 no.6:1005-1011 N-D '65.

(MIRA 18:12)

1. Institut biokhimii imeni A.N.Bakha AN SSSR i Institut
fiziologii rasteniy imeni K.A.Timiryazeva AN SSSR, Moskva.
Submitted October 5, 1964.

LYUSHIN, Sergey Fedorovich; RASSKAZOV, Valeriy Antonovich; SHEYKH-ALI,
       Davlet Mukhamedzhanovich; IKSANOVA, Raziya Rakhmatulovna;
       LIN'KOV, Yevgeniy Petrovich; KAYESHKOVA, S.M., vedushchiy red.; MUKHI-
       NA, E.A., tekhn. red.

[Paraffin control in the recovery of oil] Bor'ba s otlozheniiami pa-
rafina pri dobyche nefti. Moskva, Gos. nauchno-tekhn. izd-vo neft. i
gorno-toplivnoi lit-ry, 1961. 149 p.   (MIRA 14:7)
           (Oil wells)   (Paraffins)

L 31970-66   EWT(d)   IJP(c)

ACC NR: AP6007530   SOURCE CODE: UR/0406/65/001/002/0018/0026

AUTHOR: Lin'kov, Yu. N.

ORG: none

TITLE: Calculation of the ε-entropy of a random vector for a small ε

SOURCE: Problemy peredachi informatsii, v. 1, no. 2, 1965, 18-26

TOPIC TAGS: vector analysis, entropy

ABSTRACT: The author seeks an expression for the ε-entropy $H_\varepsilon(\xi)$ of an n-dimensional random vector whose domain satisfies some rather general conditions. The main result is the following theorem. Let $\xi = (\xi_1, \ldots, \xi_n)$ be an n-dimensional random vector with values in n-dimensional Euclidian space with a probability distribution given by a density $p_\xi(x)$, which satisfies the following conditions: (1) for some positive number r_0 $p_\xi(x) \leqslant \varphi(|x|)$ for $x \in \bar{U}_{r_0} = X \setminus U_{r_0}$ where U_{r_0} is a sphere of radius r_0 and $\varphi(\cdot)$ is a function of 1 variable so that $\varphi(u_1) \geqslant \varphi(u_2)$, for $r_0 \leqslant u_1 < u_2$ and $\int u^{n-1}\varphi(u) \log \varphi(u)\,du < \infty$. (2) $h(\xi) > -\infty$, where $h(\xi) = \int p_\xi(x) \log p_\xi(x)\,dx$. Let the loss function (x, y) be measurable on $X \times X$ and satisfy
(a) a) $\rho(x, y) = \rho(x - y)$,
(b) $\rho(x) = 0$ only for $x = 0$ and for some $v > 0$, where $\varinjlim_{|x| \to 0} |x|^{-v}\rho(x) < \infty$.

Card 1/3   UDC: 621.392.12

L 31970–66

ACC NR: AP6007530   ○

(c) $\rho(x) \geq \psi(|x|)$, where $\psi(u) \neq 0$, $\psi(0) = 0$, $\psi(u_1) \leq \psi(u_2)$, if $0 \leq u_1 < u_2$.

(d) $\int_x \rho^2(x) e^{-\psi(|x|)} dx < \infty$

Then, since $\varepsilon \to 0$

$$H_\varepsilon(\xi) = \log [a(\varepsilon) e^{-b h(\varepsilon)}] + h(\xi) + 0(1),$$

where $a(\varepsilon)$ and $b(\varepsilon)$ are solutions of the equations $a \int_x e^{-b\rho(x)} dx = 1,$

$$a \int_x \rho(x) e^{-b\rho(x)} dx = \varepsilon_0$$

The proof is given by a series of lemmas. If we also assume $\rho(x, y) = \rho(|x - y|)$ and $0 < \rho'(0) < \infty$;   then we can give asymptotic expressions for $a(\varepsilon)$ and $b(\varepsilon)$:

$$a(\varepsilon) \approx \frac{\Gamma\left(\frac{n}{2}\right)[n\rho'(0)]^n}{2\pi^{n/2}(n-1)! e^n}, \qquad b(\varepsilon) \approx \frac{n}{\varepsilon},$$

Similar expressions are derived if $\rho'(0) = 0$, $1 \leq I < k$, $0 < \rho^{(k)}(0) < \infty$

For the specific case $\rho(x, y) = \left(\frac{1}{n} \sum_{h=1}^{n} |y_h - x_h|^\alpha\right)^\beta$,   where α and β are arbitrary positive numbers

Card   2/3

L 31970-66

ACC NR: AF6007530   /

$$H_e(\xi) = \frac{n}{\alpha\beta}\log\frac{1}{e} + h(\xi) -$$

$$-\log\left\{\left(\frac{\alpha\beta e}{n}\right)^{n/\alpha\beta}\left[\frac{2}{\alpha}\Gamma\left(\frac{1}{\alpha}\right)\right]^n\frac{\Gamma\left(\frac{n}{\alpha\beta}\right)}{\beta\Gamma\left(\frac{n}{\alpha}\right)}\right\} + 0(1).$$

This problem was formulated for the author by R. L. Dobrushin and was solved under his guidance for which the author wishes to express his deep appreciation. Orig. art. has: 11 formulas.

SUB CODE: 12/ SUBM DATE: 26Dec64/ ORIG REF: 003/ OTH REF: 003

Card 3/3 IC

ACCESSION NR: AR4042166   S/0274/64/000/005/A044/A044

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Svodny*y tom, Abs. 5A230

AUTHOR: Tarasenko, F. P.; Lin'kov, Yu. N.

TITLE: Problems of spaced reception from the point of view of the information theory

CITED SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta, vy*p. 42, 1963, 168-180

TOPIC TAGS: Information theory, spaced reception, spaced system, optimum process

TRANSLATION: For a system of n-channels, to whose input is fed a useful signal and in each of whose channels there are noises and fluctuations, there is the problem of finding a method of combining signals on the output of n-channels such that the obtained signal retains the most possible share of information on the useful signal. Spaced reception is considered from the point of view of the information

Card 1/2

ACCESSION NR: AR4042166

theory and a formula is given for finding algorithms of optimum methods of reception in the presence of definite a priori data. An ideal spaced system is considered and the quantity of information for both incoherent reception in the presence of a fluctuations is determined. The necessary number of channels is determined with different signal-to-noise ratios. Some methods of combining of signals (quadratic and linear) are considered. Graphs are given for the quantity of information depending upon the number of channels with a fixed signal-to-noise ratio and for the quantity of information depending upon the signal-to-noise ratio for different number of channels. The appendix gives the derivation of the formula of rectangles for the calculation of multiple integrals. Five illustrations. Bibliography: 18 references.

SUB CODE: DP, MA   ENCL: 00

Card 2/2

TOMOVA, N.; LINKOVA, E.; SPEKTOROV, K.

The effect of different nitrogen sources on the growth and develop-
ment of a synchronous culture of Chlorella pyrenoidosa Pringsh. 32.
Doklady BAN 17 no.8:757-760 '64.

1. Institute of Plant Physiology of the Bulgarian Academy of
Sciences. Submitted by Academician I. Emanouiloff [Emanuilov, I.].

LINKOVA, Eva

Conference on new technology in the Bizuterie National Enterprise
Sklar a keramik 14 no.11: Suppl; insert N '64.

1. Bizuterie National Enterprise, Jablonec nad Nisou.

SHCHEPKOVSKAYA, Ye.V.,kandidat meditsinskikh nauk. (Khar'kov); GEKHTMAN,
      M.Ya. (Khar'kov); VOLOVIK, S.S.(Khar'kov); LINKOVA, I.I.(Khar'kov);
      SOKOL'SKIY, S.L.,kandidat meditsinskikh nauk. (Khar'kov); DUKHINA,
      B.S. (Khar'kov); MARKUS, L.M. (Khar'kov)

      New effective method for the compound treatment of tabetic atrophy
      of the optic nerves. Vrach. delo no.1:89 Ja '57   (MLRA 10:4)

      1. Ukrainskiy nauchno-issledovatel'skiy kozhno-venerolgoicheskiy
      institut.
              (OPTIC NERVE--DISEASES) (NERVOUS SYSTEM--SYPHILIS)

FEDOROV, A.A., LINKOVA, F.Y.

Determination of microgram amounts of phosphorus in metallic chromium. Zav.lab. 26 no.5:535-536 '60.   (MIRA 13:7)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Phosphorus--Analysis) (Chromium--Analysis)

S/0$2/61/027/012/001/015
B145/B147

AUTHORS: Fedorov, A. A., Krichevskaya, A. M., and Linkova, F. V.

TITLE: Determination of sulfur in metallic chromium

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 12, 1961, 1460 - 1462

TEXT: The method suggested is based on the formation of methylene blue from
H_2S with dimethyl-p-phenylene diamine sulfate and trivalent iron in hydro-
chloric acid solution. It permits the determination of sulfur in metallic
chromium within about 1.5 hr with an accuracy of $1 \cdot 10^{-4}\%$. The method can be
used for the analysis of ferrochromium, Cr-Nb alloys, some types of steel,
iron, cast iron, silicon, niobium, nitric, hydrochloric, and phosphoric acid
salts of alkali metals, as well as bases and acids, Tungsten disturbs the
analysis. Orthophosphoric acid is used as solvent. In the presence of
sulfate sulfur, 0.1 g of metallic chromium is added to 30 milliliters of
acid as reducing agent. Purified nitrogen is used as carrier gas, The
reaction vessel of quartz is cooled (-1 to -5°C). 0.5 - 1 g of the sample
is dissolved in 30 milliliters of orthophosphoric acid in an N_2 atmosphere

Card 1/2

Determination of sulfur in metallic...

600 - 650°C and at a low rate of the N_2 flow the H_2S formed is collected in 10 milliliters of 5% NaOH. This solution containing H_2S is filled into a 50-milliliter measuring flask, and mixed with distilled HCl until a weakly acid reaction takes place (Congo red as indicator). To this, further distilled HCl corresponding to 5 milliliters of HCl is added (specific gravity 1.19) furthermore, 2 milliliters of a 0.4% solution of dimethyl-p-phenylene diamine sulfate, and 2 milliliters of a 1% $FeCl_3 \cdot 6H_2O$ solution in hydrochloric acid (1:20). After shaking, filling up with H_2O, and 20 min standing, the mixture is photometrically measured with red filter in 20 mm bulbs, and the sulfur content of the sample determined from a calibration curve. There are 1 figure, 1 table, and 6 references: 4 Soviet and 2 non-Soviet The reference to the English-language publication reads as follows: A. Steigman, J. Soc. Chem. Ind., 61, I, 18 (1942).

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii im. I. P. Bardina (Central Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin)

Card 2/2

31729

S/081/61/000/021/030/094
B101/B147

5 5 3 0 0

AUTHORS: Fedorov, A. A., Ozerskaya, F. A., Malinina, R. D., Sokolova,
              Z. M., Linkova, F. V.

TITLE: Determination of manganese, iron, nickel, and lead contents
              in pure electrolytic chromium

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1961, 112, abstract
              21D113 (Sb. tr. Tsentr. n.-i. in-t chernoy metallurgii,
              no. 19, 1960, 7 - 21)

TEXT: Methods for determining Mn, Fe, Ni, and Pb in highly pure electro-
lytic chromium have been developed. Mn determination is based on
removing Cr from perchloro acid solution as CrO_2Cl_2 and photometrically
determining the violet color of MnO_4^- forming after oxidation of manganese
by means of periodate. 0.5 g (0.02 - 0.04% Mn) or 1g (0.001 - 0.02% Mn)
of chromium is dissolved in 30 milliliters (ml) of concentrated HCl and
30 ml of $HClO_4$ (specific gravity 1.67). The solution is evaporated,
concentrated HCl is added, and the substance is heated until the
Card 1/3

31729

Determination of manganese...

S/081/61/000/021/030/094
B101/B147

liberation of CrO_2Cl_2 vapors has stopped. This process is repeated. The dry residue is dissolved in 5 ml of concentrated HCl, 15 ml of H_2SO_4 (1:4) is added, and the substance is heated until white H_2SO_4 fume has been formed. After cooling, the salt deposits are dissolved in a minimum amount of water, the solution is filtered, and evaporated to 15 - 20 ml. The residue is mixed with 1 ml of concentrated H_3PO_4, 20 ml of 2.5% KIO_4 solution, boiled for 5 - 8 min, moderately heated for another 15 - 20 min, cooled, diluted with water to 50 ml, and photometrically measured with a green light filter in a 5-cm cuvette, a standard solution serving for comparison. For determining Fe (0.002 - 0.1%), 0.5 - 2 g of the sample is dissolved in H_2SO_4 (1:4), the Cr^{3+} is oxidized with ammonium persulfate to Cr^{6+}, and iron and aluminum (as collector) are precipitated with NH_3. The precipitate is dissolved, and Fe photometrically determined with o-phenanthroline. Determination of Ni (0.001 - 0.1%) includes its separation from Cr by extracting the

Card 2/3

31729

S/081/61/000/021/030/094
B101/B147

Determination of manganese...

nickel dimethyl glyoximate with chloroform from weakly ammoniacal solution, re-extraction of Ni, and photometric determination with dimethyl glyoxime in alkaline medium in the presence of an oxidizing agent. For determining Pb, the latter is coprecipitated by means of H_2S with Cu (as collector).

After separation from Cu by precipitation (together with Fe) by means of NH_4OH solution, polarographic determination is performed in hydrochloric acid solution containing NaCl. The effect of atmospheric oxygen, Sb, Bi, Cu, and Fe^{3+} is eliminated by metallic iron reduced with hydrogen. [Abstracter's note: Complete translation.]

Card 3/3

FEDOROV, A.A.; LINKOVA, F.V.

Determination of aluminum oxide in metallic aluminum by hydro-
chlorination. Zhur.anal.khim. 17 no.1:53-55 Ja-F '62.
(MIRA 15:2)

1. I.P.Bardin Central Scientific-Research Institute of Ferrous
Metal Industry, Moscow.
(Aluminum oxide)

FEDOROV, A.A.; BUYANOV, N.V.; LINKOVA, F.V.; SUKHOVA, N.P.

Spectrochemical determination of hafnium (0.5 - 90 percent)
in zirconium-hafnium and zirconium-titanium-hafnium alloys.
Sbor. trud. TSNIICHM no.24:188-190 '62.   (MIRA 15:6)
(Zirconium-hafnium alloys--Spectra) (Hafnium--Spectra)

FEDOROV, A.A.; LINKOVA, F.V.

      Determination of tellurium in carbon steels. Sbor. trud.
      TSNIICHM no.24:147-149 '62.   (MIRA 15:6)
              (Steel—Analysis) (Tellurium analysis)

FEDOROV, A.A.; LINKOVA, F.V.

Determination of aluminum oxide in aluminum metal. Sbor. trud.
TSNIICHM no.24:172-178 '62.   (MIRA 15:6)
        (Aluminum--Analysis) (Aluminum oxide--Analysis)

FEDOROV, A.A.; OZERSKAYA, F.A.; LINKOVA, F.V.

Determining micro- and macroquantities of rare-earth elements. Sbor.-
trud. TSNIICHM no.31:197-199 '63.   (MIRA 16:7)
                        (Rare-earth metals—Analysis)

L 14979-65   EWT(m)/EPF(n)-2/EPA(bb)-2/EWP(b)   Pu-4   ASD(a)-5/AFWL/SSD/AEDC(b)/
ASD(m)-3/AFTC(p)/RAEM(1)/ESD(gs)/ESD(t)   JD/WW/JG/MLK
ACCESSION NR: AT4048093   S/0000/64/000/000/0017/0018

AUTHOR: Fedorov, A.A., Buyanov, N.V., Linkova, F.V., Sukhova, N.P.

TITLE: Spectrochemical determination of hafnium in zirconium-hafnium and zirconium-titanium-hafnium alloys

SOURCE: Spektral'ny*ye i khimicheskiye metody* analiza materialov (Spectral and chemical methods of materials analysis); sbornik metodik. Moscow, Izd-vo Metallurgiya, 1964, 17-18

TOPIC TAGS: titanium alloy, spectroscopy, hafnium determination, hafnium alloy, zirconium alloy

ABSTRACT: The spectrochemical method used for the determination of hafnium in Zr-Hf and Zr-Ti-Hf alloys differs from the earlier methods, in that the alloy sample was dissolved in a mixture of acids, after which the hydroxides were precipitated by ammonia and calcined until the formation of oxides. Analysis was by a spectroscopic method. This method is suitable for determining $0.5 - 90\%$ Hf; the relative error of the method for $0.5-2$, $2-10$, $10-40$ and $40-90$ % Hf is 10, 4, 2.5 and 2%, respectively. The sensitivity of the method is 0.1%. The preparation of the sample is described. The spectral

Card 1/2

L 14979-65
ACCESSION NR: AT4048093

analysis was carried out on the ISP-22 spectrograph with a one-lens condenser and a 0.01 mm aperture width. The distance from the lens to the light source was 15 cm, and to the spectrograph aperture, 75 cm. The light source was a spark generator IG-2, C=0.01 microfarad, L=0.01 microhenry, spark gap 3 mm, i=1.7 amps, the distance between the carbon electrodes = 1.5 m. For the determination of 0.5-10% Hf, the pair of lines Hf 2861.70 – Zr 2856.06 Å were used; for 10-90% Hf, the pair Hf 2861.012 – Zr 2810.914 Å were used instead. The experimental data are tabulated. Orig. art. has: 1 table.

ASSOCIATION: Tsentral'ny*y nauchno-issledovatel'skiy institut chernoy metallurgii im. I.P. Bardina (Central Scientific Research Institute of Ferrous Metallurgy)

SUBMITTED: 12Feb64   ENCL: 00   SUB CODE: MM, IC

NO REF SOV: 001   OTHER: 000

Card 2/2

LINKOVA, G.G.

Investigating the effect of the rigidity of a boring bar with
bracket fastening on the smoothness of a finely bored surface.
Trudy Od. tekh. inst. 14:13-16 '62.   (MIRA 16:12)

1. Rabota vypolnena na kafedre soprotivleniya materialov
Odesskogo tekhnologicheskogo instituta. Rukovoditel' raboty -
doktor tekhn. nauk, prof. Lunets, Ye.B.

LIN'KOVA G.N., aspirant

    Age-related characteristics of hydroxyproline content in the
muscles of swine. Izv. TSKHA n. 4 ?:211-215 '62.   (MIRA 16:7)

        (Swine—Physiology)   (Proline)

GOL'DBERG, K.M.; GEL'FANDBEYN, N.M.; Prinimali uchastiye: BARIL'OTI,
     A.S.; KAPUSTINA, A.I.; LIMKOVA, L.M.; STRUKOVA, V.A.; SERKOVA,
     L.V.; FRADKINA, TS.Ye.

     Anticorrosive alkyd GF-020 priming. Lakokras.mat.i ikh prim.
     no.2:71-74 '62.   (MIRA 15:5)

     1. Khar'kovskiy lakokrasochnyy zavod "Krasnyy khimik".
                    (Protective coatings)

Lin'kova, M. G.

USSR/Chemistry - Conversions

Card 1/2   Pub. 40 - 8/27

Authors   :   Knunyants, I. L.; Lin'kova, M. G.; and Ignatenok, P. G.

Title   :   Conversions of mercaptoamino acids. Part 1. Isodimethylcysteine and its
                   derivatives

Periodical :   Izv. AN SSSR. Otd. khim. nauk 1, 54-61, Jan-Feb 1955

Abstract   :   Data are presented on the addition reaction of sulfur chlorides and alkyl-
                   thiochlorides to dimethyl acrylic acid and its ester. In contrast to the
                   addition reaction of sulfur chlorides to olefins, which results in the form-
                   ation of symmetrical sulfides, the addition to dimethylacrylic acid and
                   its esters is concluded by the formation of stable sulphene chlorides.

Institution :   Acad. of Sc., USSR, The N. D. Zelinskiy Inst. of Org. Chem.

Submitted   :   April 9, 1954

Card 2/2   Pub. 40 - 8/27

Periodical :   Izv. AN SSSR. Otd. khim. nauk 1, 54-61, Jan-Feb 1955

Abstract   :   It was found that the reaction between the addition products and ammonia
                   results in the formation of alpha-mercapto-beta-aminoisovaleric acid
                   which is an isomer of natural dimethycysteine and some of its derivatives.
                   Two references: 1 German and 1 USA (1905 and 1946).

Lin' Kova, M. G.

USSR/ Chemistry - Conversions

Card 1/2   Pub. 40 - 9/27

Authors   :   Knunyants, I. L., and Lin'kova, M. G.

Title   :   Conversions of mercaptoamino acids. Part 2. Acylation and alkylation
                 of dimethylcysteine

Periodical   :   Izv. AN SSSR, Otd. Khim. nauk 1, 62-70, Jan-Feb 1955

Abstract   :   Experimental data are presented showing that dimethylcysteine acylates
                 easily with acid anhydrides and acid chlorides resulting in the formation
                 of only N-acyl derivatives. The aqueous-alkaline dimethylcysteine
                 solutions alkylate easily, especially with halide substituted acids, form-
                 ing only S-alkyl derivatives.

Institution :   Acad. of Sc., USSR, The N. D. Zelinskiy Inst. of Org. Chem.

Submitted   :   April 9, 1954

Card 2/2

Pub. 40 - 9/27

Periodical :   Izv. AN SSSR, Otd. khim. nauk 1, 62-70, Jan-Feb 1955

Abstract :   When combined with acid chlorides of beta-halide substituted carboxylic acids dimethylcysteine produces derivatives of 1-thio-5-azocycloheptanone-4. The products obtained through S-alkylation of dimethylcysteine with alpha-bromocarboxylic acids are described. Three USA references (1905-1949).

Lin'kova, M. G.

USSR/ Chemistry - Conversions

Card 1/1

Pub. 40 - 10/27

Authors   :   Knunyants, I. L.; Kil'disheva, O. V.; and Lin'kova, M. G.

Title   :   Conversions of mercaptoamino acids. Part 3. Acylation and alkylation
                  of dimethylcysteine

Periodical   :   Izv. AN SSSR. Otd. khim. nauk 1, 71-77, Jan-Feb 1955

Abstract   :   The derivation of various N-acrylic derivatives of dimethylcysteine con-
                  taining Br, Cl and methoxyl in the acyl radical is described. It is shown
                  that the above mentioned derivatives cyclate as a result of the intra-
                  molecular attachment of the mercapto group of dimethylcysteine in place of
                  the multiple bond of the crylic radical forming 1-thia-5-aza-cyclo-heptanone
                  -3. The results obtained from the reaction of dimethylcysteine with unsat-
                  urated acids and their derivatives, are explained. One USSR reference
                  (1955).

Institution :   Acad. of Sc., USSR, The N. D. Zelinskiy Inst. of Org. Chem.

Submitted   :   April 9, 1954

U S S R .

-10051* Conversions of Mercapto Amino Acids. Prevrash-chenila merkaptoaminokislot. IV. a,β-Dihaloido-a-Acyl-aminopropionic Acids. a-β-Digaloido-a-atsilaminopropionovye kisloty. V. β-Haloido-a-oxy-a-Acylaminopropionic Acids and Their Derivatives. β-Galoido-a-oksi-a-atsilaminopropionovye kisloty i ikh proizvodnye. VI. β-Haloido-a-Acylamino-ucrylic Acids and Their Derivatives. β-Galoido-a-atsilamino-akrilovye kisloty i ikh proizvodnye. (Russian.) O. V. Kil-disheva, L. P. Rastelkeno, I. L. Knuniants, and M. O. Linkova. Izvestlia Akademli Nauk SSSR, Otdelenie Khimicheskikh Nauk, 1955, no. 2, Mar.-Apr., p. 260-288.

Includes tables. 37 ref.

LIN KOVA, M, G,

USSR/ Chemistry - Biochemistry

Card 1/1   Pub. 40 - 11/26

Authors   : Kil'disheva, O. V.; Lin'kova, M. G.; and Knunyants, I. L.

Title   : Conversions of mercaptoamino acids. Part 5. Beta-halogeno-alpha-oxy-
             alphaacylaminopropionic acids and their derivatives

Periodical : Izv. AN SSSR. Otd. khim. nauk 2, 271 - 281, Mar-Apr 1955

Abstract   : It was established experimentally that alpha, beta-dihalogeno-alpha-acly-
             aminopropionic acids easily exchange the halogen atom oriented in alpha-
             position into oxy, alkoxy, acetoxy and other groupings. It is shown that
             alpha-oxy-, alpha-alkoxy-beta-halogeno-alpha-phenacetylaminopropionic
             acids in the presence of acetic anhydride convert easily into 2-benzyl - 4 -
             halogenomethyleneoxazolones. The product obtained from the reaction of
             beta-chloro-alpha-benzoylamino-alpha-oxypropionic acid with acetic anhydride
             is described. One USSR reference (1955). Table.

Institution : Acad. of Sc., USSR, The N. D. Zelinskiy Inst. of Organ. Chem.

Submitted : April 9, 1954

LINKOVA, M.G.

USSR/ Chemistry - Biochemistry

Card 1/1   Pub. 40 - 12/26

Authors   : Kil'disheva, O. V.; Lin'kova, M. G.; and Knunyants, I. L.

Title   : Conversions of mercaptoamino acids. Part 6. Beta-halogeno-alpha-acylamino acrylic acids and their derivatives

Periodical   : Izv. AN SSSR. Otd. khim. nauk 2, 282 - 288, Mar-Apr 1955

Abstract   : It is shown that thermal cleavage of hydrogen halide from alpha, beta-dihalo-geno-alpha-acylaminopropionic acid results in the formation of beta-halogeno-alpha-acylaminoacrylic acid. The product obtained from the reaction of the acrylic acid with acetic anhydride is described. The derivation of the first representative of unsaturated internal anhydrides of carboxyamino acid - internal anhydride of alpha-carboxyamino-beta-bromacrylic acid - during the reaction of beta-bromo-alpha-carbobenzyloxyaminoacrylic acid with dehydrating agents is discussed. Six references: 4 USA and 2 USSR (1947-1955). Tables.

Institution : Acad. of Sc., USSR, The N. D. Zelinskiy Ins. of Organ. Chem.

Submitted   : April 9, 1954

LINKOVA, M. G.

Transformations of mercapto amino acids. VII. Transformations of 2,3-dihalo-2-acylaminopropionic acids. (Acyloxy)pyruvic acids. O. V. Kil'disheva, M. G. Lin'kova, and I. L. Knunyants (N. D. Zelinskiĭ Inst. Org. Chem., Acad. Sci. U.S.S.R., Moscow). *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1955, 452-61; *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1955, 401-8(Engl. translation); *C.A.* 50, 4914d.—The action of H_2O over a wide pH range converts dihalo(acylamino)propionic acids into (acyloxy)pyruvic acids through intermediate 2-phenyl-4-hydroxy-4-carboxyoxazolinones. Treatment of 4.5 g. $BrCH_2CBr(NHCOCH_2Ph)CO_2H$ (I) with 2.1 g. $NaHCO_3$ in 20 ml. H_2O and acidification to pH 1.5 with HCl gave a ppt. of 24% $BrCH_2C(OH)(NHCOCH_2Ph)CO_2H$, m. 105-6°; evapn. of the mother liquor and extn. with Et_2O yielded 17% *(phenylacetoxy)pyruvic acid hydrate*, m. 57-8° (from $CHCl_3$), giving a red color with $FeCl_3$ *(2,4-dinitrophenylhydrazone*, m. 168-70°, identical with an authentic specimen). The acid forms a sparingly sol. Na salt. Similarly $BrCH_2CBr(NHBz)CO_2H$ (II) yielded 44.2% $BrCH_2C(OH)(NHBz)CO_2H$, m. 92-3°, and a moderate amt. of *benzoyloxypyruvic acid hydrate*, m. 68-70° (from $CHCl_3$) *(2,4-dinitrophenylhydrazone*, m. 168-73°), which, heated with $FeCl_3$ in $0.5N$ NaOH gave BzOH. The mother liquor yielded $BrCH_2C(NHBz)_2CO_2H$, m. 124°, as well as some $BzOCH_2C(OH)(NHBz)CO_2H$, m. 90° and 114°, whose structure is uncertain; this yields a *2,4-dinitrophenylhydrazone*, m. 168-70°, identical with that from $BzOCH_2COCO_2H$. Keeping $ClCH_2C(OMe)(NHBz)$-CO_2Me with MeONa-MeOH 2 hrs. gave the *Me ester*, m. 66° *(HCl salt*, m. 110°), of *2-phenyl-4-methoxy-2-oxazoline-4-carboxylic acid* (III); $2N$ NaOH in MeOH similarly gave

the *Na salt* of III, sol. in EtOH and H_2O; acidification yielded $BzOCH_2COCO_2H$. **3,3-Dimethylcysteine** (IV) (0.3 g.), 0.16 g. $NaHCO_3$, 5 ml. H_2O, and 0.6 g. $BrCH_2C(OH)$-$(NHCOCH_2Ph)CO_2H$ kept 12 hrs. gave a ppt. of *mono-Na salt of 5,5-dimethyl-2-(phenylacetoxymethyl)-2,4-thiazolidine-dicarboxylic acid* (V); free V, decomp. 166-7° (from aq. Me_2CO) (pure, decomp. 167-8°). The same result was obtained with I and 2 moles $NaHCO_3$. V with CH_2N_2 gave apparently *di-Me 5,5-dimethyl-2-(phenylacetoxymethyl)-methyl-2,4-thiazolidinedicarboxylate*, m. 101-2° (from Et. IV (1.9 g.), 20 ml. H_2O, and 4.3 g. II kept 12 hrs. gave 80.6% dicarboxylic acid, decomp. 165-6° (from dil. Me_2CO), identified as the *2-BzOCH₂ analog* of V (from dil. Me_2CO); a low yield of this also formed from IV and II in aq. $NaHCO_3$, along with a fair yield of $BzOCH_2COCO_2H$ hydrate, isolated as the Na salt; the dicarboxylic acid cleaved with $HgCl_2$ gave the same *2,4-dinitrophenylhydrazone*, m. 187-8°, of $BzOCH_2COCO_2H$ as described above. This with activated Al in 80% EtOH gave 28% alanine, with traces of serine and O-benzoylserine, detected chromatographically. Similar reduction of the 2,4-dinitrophenylhydrazone of $PhCH_2CO_2CH_2COCO_2H$ gave serine, alanine, and O-(phenylacetyl)serine (chromatographic estn.); the 2,4-dinitrophenylhydrazone of $HOCH_2COCO_2H$ gave serine and alanine (chromatographic estn.), while O-benzoylserine gave only serine after the reduction. **VIII. Alkylation and derivatives of 2-acylamino-3-halopropionic acids.** I. L. Knunyants and V. V. Shokina. *Izvest. Acad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1955, 462-71; *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1955, 409-16(Engl. translation).—Keeping 20.6 g. $PhCH_2CONHC(:CH_2)CO_2H$ overnight in 70 ml.

"APPROVED FOR RELEASE: 07/12/2001   CIA-RDP86-00513R000930010011-6

O. V. Kil'disheva

AcOH contg. 18 g. HBr, followed by diln. with ice H_2O, gave 90% $BrCH_2CH(NHCOCH_2Ph)CO_2H$ (I), m. 163° (from EtOAc), which loses HBr in warm H_2O, $NaHCO_3$, $AgNO_3$, or pyridine. Treatment with CH_2N_2 gave 74.7% *Me ester*, m. 87–9°. Refluxing the free acid with H_2O contg. a little HBr 3 hrs. gave $PhCH_2CO_2H$ and 78.5% serine, decomp. 230°. I warmed with Ac_2O and evapd. *in vacuo* gave after extn. with Et_2O and evapn. of the ext. *4-methyl-2-benzylidenepseudooxazolone*, m. 129–31° [cf. *Chemistry of Penicillin* 1949, pp. 794–8 (Comforth, *C.A.* 49, 3137a)], which is an irritant to mucous membranes. Cysteine (0.12 g.) in 2 ml. dil. NaOH treated with 0.26 g. I with gradual addn. of NaOH to maintain the soln. basic, and the mixt. evapd. the following day, and refluxed with 20% HCl 3 hrs. yielded $PhCH_2CO_2H$; the filtrate evapd. and treated with aq. NaOAc gave 50% $HO_2CCH(NH_2)CH_2SCH_2CH(NH_2)CO_2H$, decomp. 240°. Similar reaction with dimethyl-cysteine gave *5,5-dimethyl-2-benzyl-4-thiazolidinecarboxylic acid*, m. 141–3°, and HCl-insol. *N-(phenylacetyl)dimethyl-cysteine*, m. 120–30°, as well as some serine. Dry HBr passed into 4 ml. AcOH contg. 2 g. $Bu_2NHC(:CH_2)CO_2H$ and the mixt. quenched in ice after 1 hr. yielded 66% $BrCH_2CH(NHBz)CO_2H$, decomp. 136–7° (from EtOAc); CH_2N_2 gave the *Me ester*, m. 116–17° (cf. Fry, *C.A.* 44, 7240i). Refluxing this with very dil. HBr 2 hrs. gave 75% *O-benzoylserine*, m. 150°; refluxing with 20% HCl gave serine. Dry HCl passed into a dry dioxane soln. of the unsatd. acid gave $ClCH_2CH(CO_2H)NHBz$, m. 143–4°.

Similarly was prepd. $ClCH_2CH(CO_2H)NHCOCH_2Ph$, m. 174–5° (from EtOAc). Heating 10 g. phenaceturic acid and 30 ml. Ac_2O 5–10 min. at 60°/40 mm. and evapg. *in vacuo* at 30–40° gave 64.5% *phenaceturic anhydride*, m. 115–17°. This (1.84 g.) added to 0.73 g. dimethylcysteine in 5 ml. H_2O and 0.4 g. NaOH at 10°, and the mixt. shaken 5–10 min. and acidified with HCl gave a ppt. which recrystd. from H_2O, yielded 50% *N-(phenaceturyl)dimethylcysteine*, m. 142–4°. This treated in 2N NaOH with $ClCH_2CO_2H$ 1 hr. at 0° gave $HO_2CCH(NHCOCH_2PHCOCH_2Ph)CMe_2SCH_2CO_2H$, decomp. 90–100° (from EtOH-Et_2O). MeOH contg. a trace of HCl with 2-phenyl-4-methyl-4-benzamido-2-oxazolin-5-one (II), m. 193° gave $MeC(NHBz)_2CO_2Me$, m. 167–8°; 1.5 g. of the free acid treated with 3 g. $SOCl_2$ and the $SOCl_2$ evapd. gave 1.4 g. $II.HCl$, decomp. 160°, hydrolyzed to the initial acid with hot 0.1N NaOH II (1 g.) added to 0.5 g. dimethylcysteine in 13 ml. 0.5N NaOH and kept 3 hrs. at 50° gave, after filtration and acidification with HCl, 50% $MeC(SH)CH[NHCOC(NHBz)_2Me]CO_2H$, m. 200–4° (from aq. EtOH), heating 3.4 g. $MeC(NHCOCH_2Ph)_2CO_2H$ and 12 ml. Ac_2O 2 hrs. on steam bath gave 70% *2-benzyl-4-methyl-4-(phenylacetylamino)-2-oxazolin-5-one*, m. 169–70° (from EtOAc). This heated with dimethylcysteine in N NaOH 0.5 hr. at 50° gave, after filtration and acidification with HCl, 40% $N(\alpha,\alpha$-*bis(phenacetamido))propionyldi-methylcysteine*, $HO_2CCH[NHCOC(NHCOCH_2Ph)_2Me]CMe_2SH$, m. 187–9° (from 50% EtOH).

— G. M. K.

APPROVED FOR RELEASE: 07/12/2001   CIA-RDP86-00513R000930010011-6"

LIN'KOVA,M.G.; KIL'DISHEVA,O.V.; KNUNYANTS,I.L.

β-thiolactones. Izv.AN SSSR. Otd.khim.nauk no.3:569-570
My-Je '55.   (MLRA 8:9)

1. Institut elementoorganicheskikh soyedineniy Akademii nauk
SSSR   (Thiolactones)

LIN'KOVA, M.G.

7

Transformations of mercapto amino acids. XI. α,β-Disubstituted α-acylamino carboxylic acids. O. V. Kil'-disheva, M. G. Lin'kova, Z. V. Benevolenskaya, and I. L. Knunyants. Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci. 1956, 731-41(English translation).—See C.A. 51, 1051c.

B.M.B.

KIL'DISHEVA, O.V.; LIN'KOVA, M.G.; BENEVOLENSKAYA, I.L.

Conversions of mercapto amino acids. Part 11. α,β-disubstituted-
-α-acylaminocarboxylic acids. Izv.AN SSSR Otd.khim.nauk no.7:834-
842 Jl '56.   (MLRA 9:10)

1.Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR.
            (Acids, Fatty)

Structure and properties of oxazolones. O. V. Kil'disheva, M. G. Lin'kova, and I. L. Knunyants (Inst. Hetero org. Compds., Acad. Sci. U.S.S.R., Moscow). *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1957, 710-20.—Examn. of the phys. and chem. properties of unsatd. oxazolones showed that the structures of true oxazolones, such as $RCH{:}C.N{:}C(CH_2R').O.CO$, and the pseudo form, $RCH_2C{:}N.C({:}CHR').O.CO$, depend on the substituents in the 2- and 4- positions; that structure is formed which permits the most extended conjugated system. 2-Benzylidene-4-(halomethyl) oxazolones from the anhydridization of dihalophenacetyl aminopropionic acids are the pseudo isomers; in this group of oxazolones strongly nucleophilic groups add at the 4,2'- positions (1–4 addn.) and the resulting satd. oxazolone opens its ring. Weak nucleophiles cleave the ring and attack the 2- position, yielding pyrrole derivs. 2-Benzylidene-4-(bromo methyl)pseudoöxazol-5-one (I) (1.3 g.) in 6 ml. MeOH with 0.6 ml. piperidine in MeOH yielded 80% $(CH_3)_2NC(CH_2$ $Br)(CO_2Me)NHCOCH_2Ph$ (II), decomp. 100°. The above pseudoöxazolone kept overnight in $2N$ NaOH-MeOH gave $PhCH_2CO_2COCO_2H$, isolated as the 2,4-dinitrophenylhydra zone. $BrCH_2CBr(CO_2H)NHCOCH_2Ph$ (1.8 g.) in Et_2O with 0.93 ml. piperidine yielded II, m. 102–3°. 2-Benzyli dene-4-bromomethyl-4-pseudoöxazol-5-one (0.26 g.) in Et_2O treated with 0.18 ml. AcOH and 0.17 ml. piperidine in Et_2O, and the soln. washed after 30–40 min. with $2N$ HCl and H_2O yielded 0.15 g. $BrCH{:}C(NHCOCH_2Ph)CON$ $(CH_2)_4$, m. 105–6°. I (0.532 g.), 0.2 g. powd. K_2CO_3, and 5 ml. EtSH kept at room temp. gave 0.3 g. $EtSCH_2C(SEt)$ $(CO_2H)NHCOCH_2Ph$, m. 127–8°. I (1.3 g.) in 25 ml. abs. MeOH stirred with 0.35 g. powd. K_2CO_3 and the soln. evapd. and acidified gave 52% *2-methoxy-3-phenyl-4-bromo Δ^2-pyrroline-5-carboxylic acid* (III), m. 138–40°, resolidifies

Distr: 4E4j/4E2c(j)/4E3d

Kildisheva, O. V., Lin'keva, M. G. and...
on heating and rem. 163–60° (the m.p. of the alc.-free sub-
stance); the acid heated in H₂O or concd. HCl yields *3-
phenyl-4-bromo-5-pyrrolecarboxylic acid*, m. 163–70°, which
with CH₂N₂ gives the *Me ester*, m. 133–4°. III similarly
gave its *Me ester*, m. 161–2°. III kept in 2N NaOH 3 days
gave *2-methoxy-3-phenyl-5-pyrrolecarboxylic acid*, m. 295°.
[*Me ester*, m. 159–60° (prepd. with CH₂N₂), forms the *HCl
salt*, m. 125°]. 3-Phenyl-4-bromo-5-pyrrolecarboxylic acid
with 5 ml. CHCl₃ and 10% Br in CHCl₃ gave, after filtra-
tion, evapn., and rubbing of the residue with satd. NaHCO₃,
an unstated yield of *3-phenyl-4,5-dibromopyrrole*, m. 144–6°.
I shows λ 3600 and 2400 A.; 2-benzylidene-5-oxazolone
shows λ 3580 and 2300 A. G. M. Kosolapoff

LITKUIR, M. G.

α-Acylamino-β-haloacrylic esters. II. Reactions with amines and mercaptans (new methods of preparation of derivatives of penicillamin acids). O. Y. Kildisheva, M. G. Linkova, R. S. Talis, and I. L. Knunyants (Inst. Hetero-org. Compds., Moscow). Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk 1957, 828-33; cf. C.A. 50, 9916c.—2-Phenyl-4-chloromethylene-5-oxazolone (Ia) (2 g.) in 3 ml. abs. MeOH treated with 1 drop 10% MeONa or K_2CO_3 and allowed to stand 10 min. gave, after concn. in vacuo, 100% $ClCH:C(NHBz)CO_2Me$ (II), m. 92-3°, which in several days in 12% NH-MeOH gave $H_2NCH:C(NHBz)-CO_2Me$, m. 144° (this yielded 2,4-dinitrophenylhydrazone of Me α-formylhippurate, m. 190-1°). Use of PhNH₂ in the last reaction gave $PhNHCH:C(NHBz)CO_2Me$, m. 179°; use of piperidine gave $(CH_2)_5NCH:C(NHBz)CO_2Me$, m. 127°.

$(CH_2)_5NCH:ClCO_2Me)NHCOCH_2Ph$, m. 156°, and Me bromophenacetylaminoacrylate similarly gave $PhCH_2SH$ in liquid NH_3 in 2 days gave 75% $PhCH_2SCH:-C(NHBz)CO_2Me$, m. 107-8°. To 0.51 g. I anilide in liquid NH_3 and 0.12 g. KNH_2 was added 0.5 g. $PhCH_2SH$; after 2 days there was obtained 78% $PhCH_2SCH:C(NHBz)-CONHPh$, m. 191-2°. Ia (0.2 g.) in Et_2O was treated with 0.18 ml. AcOH and 0.2 ml. PhNH₂ yielding in 30 min. 46% $GCH:C(NHBz)CONHPh$, m. 195-6°. $ClCH:C-(NHBz)CO_2H$ in liquid NH₃ with PhCH₂NH₂ in 2 days gave 11.3% $PhCH_2SCH:C(NHBz)CO_2H$, m. 204-6°. -$PhCH_2SH$ in liquid NH₃ 1 day gave with $BrCH:C(NHCO-C_6H_4P_4)CO_2Me$ gave 80% $PhCH_2SCH:C(NHCOCH_2Ph)-CO_2Me$, m. 104-0°, which kept 1 day with $2N$ NaOH in MeOH gave $PhCH_2SCH:C(NHCOCH_2Ph)CO_2H$, m. 170-8°. In the above reaction with PhCH₂SH the use of 2 moles of the latter gave $(PhCH_2S)_2CHCH(NHCOCH_2Ph)-CO_2Me$, m. 75°, also formed by addn. of PhCH₂SH to the corresponding acrylate. Use of 2 moles of EtSH in the n...- action similarly gave $(EtS)_2CHCH(NHCOCH_2Ph)CONH_2$, m. 167-9°, and $(EtS)_2CHCH(NHCOCH_2Ph)CO_2H$, m. 127-8° which heated to 80° gave $EtSCH:C(NHCOCH_2Ph)-CO_2H$, m. 107°.
G. M. Koshapoff

Dist: 4E4.3/4E3d/4E2p(J).

KNUNYANTS, I.L.; PERVOVA, Ye.Ya.; LIN'KOVA, M.G.; KIL'DISHEVA, O.V.

β-Thiolactones, their polycondensation and polymerization. Khim. nauka i prom. 3 no.2:278-279 '58.   (MIRA 11:6)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
                        (Lactones)

5(3)

AUTHORS: Kil'disheva, O. V., Lin'kova, M. G.,   SOV/62-58-11-12/26
              Savosina, V. M., Knunyants, I. L.

TITLE: α,β-Disubstituted α-Acylamino Carboxylic Acids
              (α,β-Dizameshchennyye α-atsilaminokarbonovyye kisloty)
              Communication II. A New Method of Forming
              Oxazole-4-Carboxylic Acids (Soobshcheniye 2. Novyy sposob
              obrazovaniya oksazol-4-karbonovykh kislot)

ABSTRACT: It has been communicated (Ref 1) that α,β-dihalogen-
              α-acylamino propionic acids easily react with water,
              alcohols, and amines and that they form α-substituted
              α-acylamino-β-halogen carboxylic acids (I). Further
              investigations have demonstrated that α,β-dihalogen-α-
              acylamino propionic acids easily react with mercaptans and
              according to the halogen (chlorine or bromine) mono- or
              dialkthio acids are obtained. In this paper a new reaction
              for the formation of oxazole carboxylic acids from
              α-acylamino-β-halogen acrylic acids is demonstrated.
Card 1/3 α-substituted α-acylamino-β-halogen propionic acids

α, β-Disubstituted α-Acylamino Carboxylic Acids.   SOV/62-58-11-12/26
Communication II. A New Method of Forming
Oxazole-4-Carboxylic Acids

transform into oxazoline carboxylic acids under the action
of alkali. They form according to the conditions either
acyloxy-pyroracemic acids or oxazole carboxylic acids.
The mechanism of formation of acyloxy pyroracemic acid from
α-substituted α-acylamino-β-halogen carboxylic acids
has been described already earlier (Ref 3). In this paper
a mechanism of formation of oxazole carboxylic acids from
α-acylamino-β-halogen acrylic acids was suggested. It was
shown that the formation of oxazole carboxylic acid from
α-substituted α-acylamino-β-halogen propionic acids takes
place over a stage of formation of 2-aryl (or alkaryl)-4-
substituted oxazoline-4-carboxylic acids without preceding
transition into the corresponding α-acylamino-β-halogen
acrylic acids. There are 7 references, 3 of which are Soviet.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR
(Institute of Elemental-organic Compounds of the Academy of
Sciences, USSR)

Card 2/3

5(3)

AUTHORS: Lin'kova, M. G., Patrina, N. D.,   SOV/20-127-3-23/71
                Khunyants, I. L., Academician

TITLE: A New Method of Producing Propiothiolactone.

ABSTRACT: Under the influence of chloro carbonic acid ester, β-propio-
                thiolactone is developed by β-mercapturic acids (Refs 1-3) in
                the presence of triethylamine. It proved, however, that the
                same thiolactones can be developed more easily by an influence
                of H_2S on the chlorides of β-halogen-carboxylic acids. The
                extension of the reaction (I) on the chlorides of other β-
                halogen-carboxylic acids showed that the new method is of
                universal validity for the production of β-propiothiolactone.
                A careful investigation of the formation conditions of
                α-propiothiolactone showed that, according to the permanence
                of the developing β-propiothiolactone, in some cases sodium
                sulphide may be used instead of H_2S. In order to prevent

Card 1/2   a splitting of the developing thiolactone, the temperature

A New Method of Producing Propiothiolactones   SOV/20-127-3-23/71

has to be kept low, the theoretical amount of triethylamine has to be used and too great an excess of H_2S has to be prevented. Besides, the formation possibility of α,α-diphenyl-β-propio-thiolactone by dehydration (angidratizatsya) of α,α-diphenyl-β-mercapto-propionic acid was proved; for this purpose one may use either chlorocarbonic ester or anhydride of phosphoric acid. The dehydration of β-oxy-acids, however, takes place under the development of unsaturated α,β carboxylic acids. In case of α,α-bi-substituted β-oxy-acids, no β-propiolactone develops, but a reaction takes place contrary to the aldol condensation (Refs 4,5) (see scheme). β,β-ditri-fluorine-methyl-β-oxy-propionic acid is an exception, since β,β-difluorine-methyl-β-propiolactone was produced from it recently, in the laboratory mentioned in the Association. There are 6 references, 3 of which are Soviet.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute for Elemental-organic Compounds of the Academy of Sciences, USSR)

SUBMITTED: May 20, 1959
Card 2/2

5 (3)

AUTHORS: Lin'kova, M. G., Patrina, N. D.,   SOV/20-127-4-19/60
                  Knunyants, I. L., Academioian

TITLE: Addition of Alkyl-sulphenchlorides to Acrylic Acid Derivatives

ABSTRACT :   According to the polarity of the chlorides, referred to in the
                  title the addition mentioned there does not present any diffi-
                  culties resulting in the formation of α-alkyl-thio-β-chlorine-
                  substituted acids (see Scheme) (Ref 1). It was necessary to
                  check the data contained in reference 2, in which the author
                  ascribes the structure of the α-chloro-β-alkyl thioderivatives
                  of propionic acid to these addition products (see Scheme).
                  Further investigations of the reaction mentioned in the title,
                  by the authors have again confirmed the opinions stated by them
                  before and have refuted the opinion expressed in reference 2,
                  i. e. the addition of the ethyl-sulphen-chloride to acrylic,
                  methacrylic, and dimethyl-acrylic acid, to the acrylonitrile,
                  as well as to the acid chloride and the ethyl ester of dimethyl
                  acrylic acid results in the formation of β-chloro-α-alkyl
Card 1/3   thioderivatives of propionic acid (see Scheme). During this
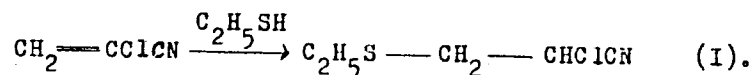
Addition of Alkyl-sulphenchlorides to Acrylic Acid   SOV/20-127-4-19/60
Derivatives

reaction the ethyl-sulphen chloride is easily added to esters, while it is more difficult to add it to acids and nitriles, and most difficult to add it to acid chlorides (Ref 1). From the acid chlorides of β-chloro-α-alk thioderivatives of propionic acid corresponding β-propiothiolactones (Ref 5) were obtained by means of H_2S (see Scheme). With an order other than that illustrated by the scheme, the formation of the said lactones would be impossible. Without cogent reasons Gundermann has given his consent to the assertions of Brintzinger (Ref 2) according to which the alkyl thiogroup assumes a β-position under the action of sulphen chlorides on acryl systems, whereas the chlorine atom assumes an α-position. To give a definite explanation of this problem the authors prepared α-chloro- - ethyl thiopropionitrile (I) and α-ethyl thio-β-chloro propio- nitrile (II) and compared their properties with one another. By adding ethyl mercaptan to α-chloro acrylonitrile (Ref 7) the following reaction was brought about:
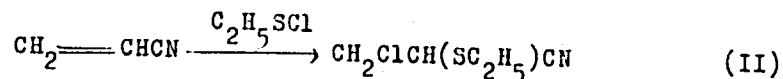
Card 2/3

$$CH_2\!=\!CClCN \xrightarrow{C_2H_5SH} C_2H_5S \!-\! CH_2 \!-\! CHClCN \qquad (I).$$

Addition of Alkyl-sulphenchlorides to Acrylic Acid   SOV/20-127-4-19/60
- Derivatives

while by the addition of ethyl sulphen chloride to acrylonitrile
the following reaction took place :

$$CH_2 = CHCN \xrightarrow{C_2H_5SCl} CH_2ClCH(SC_2H_5)CN \qquad (II)$$

It was found that I and II showed the same boiling point,
refractive indices and specific weights whereas they differ
greatly in their chemical properties; nor are their infrared
spectra the same (Figs 1 and 2). Hence, the negative charge in
alkyl sulphen chlorides is concentrated on the chlorine atom,
and that alkyl-sulphen chlorides are added to acryl systems
according to the above polarization thus forming ⅄-alkyl thio-
derivatives. There are 2 figures and 7 references, 2 of which
are Soviet.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR
(Institute for Elemental-organic Compounds of the Academy of
Sciences, USSR)

SUBMITTED: May 20, 1959
Card 3/3

LIN'KOVA, M.G.; PATRINA, N.D.; KNUNYANTS, I.L.

Properties of α,α-diphenyl-β-propiothiolactone. Izv. AN SSSR Otd. khim. nauk no.10:1825-1827 O '60.   (MIRA 13:10)

1. Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR.
(Lactones)

KNUNYANTS, I.L.,akademik; KULESHOVA, N.D.; LIN'KOVA, M.G.

Structure of the products from the addition of alkyl sulfenyl
chlorides to unsaturated acids. Dokl. AN SSSR 135 no.1:81-83 N'60.
(MIRA 13:11)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Sulfenyl chloride)

KNUNYANTS, I. L.;LIN'KOVA, M. G.; KULESHOVA, N. D.

Preparation and properties of some B-thiolactones. Izv AN
SSSR Ser Khim no. 4:644-651 Ap '64.   (MIRA 17:5)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

LIN'KOVA, M.G.; KULESHOVA, N.D.; KNUNYANTS, I.L.

Thiolactones. Usp. khim. 33 no.10:1153-1183 O '64.

(MIRA 17:11)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

KNUNYANTS, I.L.; KULESHOVA, N.D.; LIN'KOVA, M.G.

β -Propiothiolactone. Izv. AN SSSR. Ser. khim. no.6:1081-1082 '65.

(MIRA 18:6)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

MIN'KOVA,

Cystaphos monosodium salt of β-aminoethyl
as a means for increasing the effectiveness of the
of tumors, Dokl. AN SSSR 162 no.2:476-478

institut gigiyeny
nyy
1 institut elementoorganicheskikh soyedineniy AN

L 05167-67   EWT(m)/EWF(j)   WW/RM

ACC NR: AP7000733   SOURCE CODE: UR/0062/66/000/006/1075/1080

KNUNYANTS, I. L., LIN'KOVA, M. G., VELLER, N. L., Institute of Heteroorganic Compounds, Academy of Sciences USSR (Institut elementoorganicheskikh soyedineniy AN SSSR)

"Structure of Addition Products of Phenylsulfene Chloride to Derivatives of Acrylic Acid"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 6, 1966, pp 1075-1080

Abstract: The addition of phenylsulfene chloride to acrylonitrile gives a mixture of isomers: alpha-chloro-beta-phenylthiopropionitrile (I) and beta-chloro-alpha-phenylthiopropionitrile (II), with a predominance of the latter. (I) was also synthesized by the addition of thiophenol to alpha-chloroacrylonitrile. The properties of (I) and (II) were compared: splitting out of hydrogen chloride with triethylamine; saponification of the nitrile group; oxidation with hydrogen peroxide; reactions of derivative sulfones. Orig. art. has: 9 formulas. [JPRS: 37,023]

TOPIC TAGS: acrylonitrile, sulfone

SUB CODE: 07 ; SUBM DATE: 19Dec64 / ORIG REF: 001 / OTH REF: 005

Card 1/1   vmb   UDC: 542.95 + 661.719

0923   1901

ACC NR: AP6031648   SOURCE CODE: UR/0020/66/170/001/0096/0098

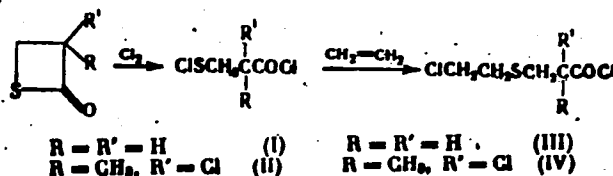AUTHOR: Lin'kova, M. G.; Orlov, A. M.; Knunyants, I. L. (Academician)

ORG: Institute of Organometallic Compounds, Academy of Sciences, SSSR (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR)

TITLE: New reaction of β-propiothiolactones
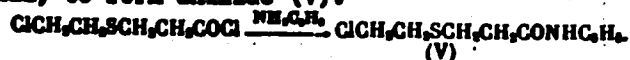
SOURCE: AN SSSR. Doklady, v. 170, no. 1, 1966, 96-98

TOPIC TAGS: lactone, organic sulfur compound

ABSTRACT: It was found that β-propiothiolactones are readily cleaved by chlorine to yield chlorides of the corresponding chlorosulfenylpropionic acids. The following reactions were carried out:

$$\text{(lactone)} \xrightarrow{Cl_2} ClSCH_2\overset{R'}{\underset{R}{C}}COCl \xrightarrow{CH_2=CH_2} ClCH_2CH_2SCH_2\overset{R'}{\underset{R}{C}}COCl$$

R = R' = H   (I)   R = R' = H   (III)
R = CH₃, R' = Cl (II)   R = CH₃, R' = Cl (IV)

Aniline reacts with (III) to form anilide (V):

$$ClCH_2CH_2SCH_2CH_2COCl \xrightarrow{NH_2C_6H_5} ClCH_2CH_2SCH_2CH_2CONHC_6H_5$$
(V)
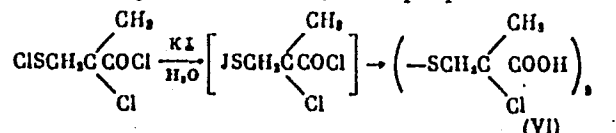
Card 1/2   UDC: 542.91+547-314

ACC NR: AP6031648

2,2'-Dichloro-3,3'-dithiodiisobutyric acid (VI) was prepared as follows:

$$ClSCH_2C\!\!\begin{array}{c}CH_3\\ \diagup \\ \diagdown \\ Cl\end{array}\!\!COCl \xrightarrow[H_2O]{KI} \left[JSCH_2C\!\!\begin{array}{c}CH_3\\ \diagup \\ \diagdown \\ Cl\end{array}\!\!COCl \right] \rightarrow \left(-SCH_2C\!\!\begin{array}{c}CH_3\\ \diagup \\ \diagdown \\ Cl\end{array}\!\!COOH \right)_2$$

(VI)

In liquid ammonia, (VI) readily exchanges a chlorine atom for an amino group to form α,α'-dimethylcystine (VII):

$$\left(-SCH_2C\!\!\begin{array}{c}CH_3\\ \diagup \\ \diagdown \\ Cl\end{array}\!\!COOH \right)_2 \xrightarrow{NH_3} \left(-SCH_2C\!\!\begin{array}{c}CH_3\\ \diagup \\ \diagdown \\ NH_3\end{array}\!\!COONH_4 \right)_2$$

(VII)
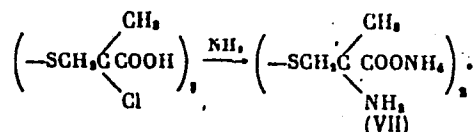
In many cases, this method may be the simplest in preparing cystine homologs.

SUB CODE: 07/ SUBM DATE: 05Feb66/ ORIG REF: 001/ OTH REF: 007

Card 2/2

L 05168-67   EWT -'/EWP(j)   WW/RM

ACC NR: AP700073   SOURCE CODE: UR/0062/66/000/006/1069/1075

KNUNYANTS, I. L., LIN'KOVA, M. G., KULESHOVA, N. D., Institute of Heteroorganic
Compounds, Academy of Sciences USSR (Institut elementoorganicheskikh soyedineniy
AN SSSR)

"Structure of Addition Products of Methyl- and Ethylsulfene Chlorides to
Derivatives of Acrylic Acid"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 6, 1966,
pp 1069-1075

Abstract: In the addition of alkylsulfene chlorides to acrylic acid deriva-
tives $CH_2=CHR$ (R = COOH, $COOCH_3$, CN, $CONH_2$) a mixture of isomers CH_2-CH-R (I)

$$\begin{array}{cc} | & | \\ Cl & SR' \end{array}$$

and CH_2-CH-R (II) is formed, the ratio of which depends upon the substituent

$$\begin{array}{cc} | & | \\ SR' & Cl \end{array}$$

R. The more electronegative the substituent, the higher the content of beta-
chloroisomer in the mixture of addition products of alkylsulfene chlorides to
acrylic acid derivatives. A reaction mechanism is proposed, which agrees with
the experimental data and accounts to the ratio of the isomers in the mixture
of addition products, the ease of isomerization of II and I, and the fact that
the reverse isomerization is not observed. Orig. art. has: 12 formulas. [JPRS: 37,023]

TOPIC TAGS: organic sulfur compound, isomerization, acrylic acid

SUB CODE: 07 / SUBM DATE: 27Mar64 / ORIG REF: 001 / OTH REF: 008
Card 1/1   vmb   UDC: 542.91 + 541.124 + 661.719

Lin'kova, M.N.

ANDROSOV, P.I., doktor meditsinskikh nauk; BABKIN, S.I., kandidat
    tekhnicheskikh nauk; BOBROV, B.S., inzhener; LIN'KOVA, M.N.,
    vrach.

    Instruments for applying tobacco bag sutures and methods of use
    Vest.khir.76 no.8:130-135 S '55.   (MLRA 8:11)

    1. Iz Nauchno-issledovatel'skogo instituta eksperimental'noy
    khirurgicheskoy appratury i instrumentov(Dir. M.G.Anan'yev)
    Moskva, I-81, Fabrichnaya liniya, d. 6.
            (GASTROINTESTINAL SYSTEM, surg.
                pouch. sutures, instrument for application & method)
            (SUTURES,
                pouch sutures in gastrointestinal surg.,instrument for
                application & method)
            (SURGERY, OPERATIVE, appratus and instruments
                instrument for application of pouch sutures in gastro-
                intestinal surg.)

ANDROSOV, P.I.; BABKIN, S.I.; BOBROV, B.S.; LIN'KOVA, M.N.

Letters to the editor. Vest.khir. 77 no.4:154 Ap '56.   (MLRA 9:8)
(SURGICAL INSTRUMENTS AND APPARATUS)

ISYUKOV, J. S.

Experimental prerequisites for clinical use of the apparatus for suturing the stomach stump. 117

Novye khirurgicheskie apparaty i instrumenty i opyt ikh primeneniye (New SURGICAL Equipment and Instruments and Experience in Their Use) NO. 1, Moscow, 1957   A collection of Papers of the Scientific Research Inst. for Experimental Surgical and Instruments.

NIIEKHAI

LIN'KOVA, N. G.

Nurses and Nursing

Ninth scientific conference of nurses in the city of Moscow. Med.sestra 5, 1952.

SIMON, N.P.; LUBIMOV, Ya.D.

Index of literature on psychology published in 1957. Vop. psikhol.
5 no.4:166-170 Jl-Ag '59.
(MIRA 12:11)
(Bibliography--Psychology)

LIN'KOVA, N.P.; LYUBIMOVA, Ye.D.

Index of literature on psychology published in 1959. Vop.
psikhol. 6 no.4:149-186 Jl-Ag '60.   (MIRA 13:9)
            (Bibliography—Psychology)

LIN'KOVA, N.P.

Index of literature of psychology published in 1960. Vop.psikhol. 7
no.3:135-170 My-Je '61.
(Bibliography—Psychology)
(MIRA 14:6)

LIN'KOVA, N.V.; OSOKINA, R.M.; RATNER, B.S.; AMIROV, R.Sh., sotrudnik;
AKINDINOV, V.V., sotrudnik

Photoprotons from Cu^{65}. Zhur.eksp.i teor.fiz. 38 no.3:
780-789 Mr '60.   (MIRA 13:7)

1. Fizicheskiy institut im. P.N.Lebedeva Akademii nauk SSSR.
2. Saratovskiy gosudarstvennyy universitet (for Amirov,
Akindinov).
                (Protons) (Copper--Isotopes)

VORONIN, L.G.;GUSEL'NIKOVA, K.G.; IORDANIS, K.A.; BETELEVA, T.G.; LINKOVA, N.V.;
          POLYANSKIY, V.B.

          Effect of electric stimulation of the reticular formation on
          conditioned reflex activity. Trudy Inst. vys. nerv. deiat.
          Ser. fiziol. 6:195-202 '61.   (MIRA 14:12)

          1. Iz Laboratorii sravnitel'noy fiziologii vysshey nervnoy
          deyatel'nosti, zav. - L.G.Voronin.
                              (CONDITIONED RESPONSE)

L 21127-66   EWT(1)/EWP(m)/T-2   IJP(c)

ACC NR: AP6003220   SOURCE CODE: UR/0382/65/000/004/0148/0152

AUTHOR: Andreyev, A. V.; Andres, U. Ts.; Lin'kova, S. A.

ORG: none

TITLE: Experimental investigation of the electromagnetic displacement of spherical bodies and sets of bodies from a conducting liquid in a compressed state

SOURCE: Magnitnaya gidrodinamika, no. 4, 1965, 148-152

TOPIC TAGS: conductive fluid, magnetic separation, MHD, solid solution

ABSTRACT: Four sets of bodies of regular and irregular form were investigated. The ejecting force was studied by changing currents and fields. The restraints increased in the direction of the current vectors and decreased in the direction of the magnetic field. When restraints in all directions occur, the magnitude of the displacement force does not equal the sum of applied forces. It was also found that the variation of solid body concentration did not influence the electromagnetic displacement force. The experimental apparatus and methods are described. This research is applicable to the MHD separation of raw materials. Orig. art. has: 6 figures.

SUB CODE: 20/   SUBM DATE: 12Mar65/   ORIG REF: 004/   OTH REF: 006

Card 1/1   UDC: 538.4:622.771.7

ACC NR: AP7005438

ANDRES, Y. TS.; LIN'KOVA, S. A.

SOURCE CODE: UR/0382/66/000/002/0148/0152

ORG: none

"Effect of Crossed Electric and Magnetic Fields on the Pseudo-Fluidization Process of Solid Particles in a Conducting Fluid"

Riga. Magnitnaya Gidrodinamika. (Magnetohydrodynamics), No. 2, 1966, pp 148-152

TOPIC TAGS: electric field, magnetic field

Abstract: An experimental investigation is made of the behavior of a layer of nonconducting particles suspended in an electrolyte under the influence of crossed electrical and magnetic fields. The experiment was conducted in a square column 0.15 m tall with a 4 x 4 (10^{-4}) m^2 cross section. The nonconducting suspension consisted of plastic particles suspended in a rising column of KOH. Alone, neither the electrical field nor the magnetic field had any noticeable effect on the layer. In the range of measurements made no significant differences were noted in the behavior of the suspended layer as compared with that in ordinary pseudofluidization; however, the Lorentz force markedly expands the layer. The ejection force coefficient is determined under static conditions as a function of layer porosity. It is found that this coefficient becomes larger as the concentration of the solid phase is increased. Orig. art. has: 5 figures and 4 formulas. [JPRS: 38,764]

SUB CODE: 20 / SUBM DATE: 23Oct65 / ORIG REF: 008

Card 1/1

UDC: 622.771.7:538.4

LIN'KOVA, T.I.

Paleomagnetic investigation of sedimentary Devonian rocks in
the northwestern part of the Russian Platform. Izv.AN SSSR.
Ser.geofiz. no.6:868-870 Je '60.   (MIRA 13:6)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.
         (Russian Platform--Rocks--Magnetic properties)

LIN'KOVA, T.I.

Laboratory investigations of the intensity of natural direct and reverse remanent magnetisation in Devonian rocks. Izv. AN SSSR. Ser. geofiz. no.1:91-95 Ja '61.   (MIRA 14:1)

1. Leningradskiy gosudarstvennyy universitet imeni A.A. Zhdanova.
          (Rocks—Magnetic properties)

LIN'KOVA, T.I.

Some results of the paleomagnetic studies of Devonian sedimentary
rocks. Izv. AN SSSR. Ser.geofiz. no.2:318-323 F '63. (MIRA 16:3)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.
   (Russian Platform--Rocks, Sedimentary--Magnetic properties)

L 04734-67   EWT(m)/EWP(j)   IJP(c)   DG/RM

ACC NR: AP6027010   (A) SOURCE CODE: UR/0080/66/039/005/1136/1140

AUTHOR: Bebikh, G. F.; Lin'kova, V. S.; Vol'fkovich, S. I.   37

ORG: Moscow State University im. M. V. Lomonosova (Moskovskiy   β
gosudarstvennyy universitet)

TITLE: Phosphorylation of rubbers

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 5, 1966, 1136-1140

TOPIC TAGS: phosphorylation, synthetic rubber, butadiene styrene rubber,
ion exchange resin, IR spectrum

ABSTRACT: The authors continued their studies on phosphorylation of
rubbers to try to obtain stronger cationites with greater ion exchange
capacity. Butadiene styrene SKS-30 and SKS-85, and butadiene nitrile
SKN-18, SKN-26 and SKN-40, on phosphorylation with P_2S_5 gave phosphorus-
containing materials melting well above 200°C, insoluble in organic
solvents, acids and alkalis. The ion exchange capacity of these
cationites (with the exception of SKS-85, which is only 1.04) is 6-7 mg
equiv/gm. The position of the phosphono groups in the rubber
macromolecules was established with the help of IR spectroscopy. The
authors thank V. M. Shats for conducting tests (on the sorption of

Card 1/2   UDC: 661.183.123

L 04734-67

ACC NR: AP6027010 O

scandium by cationites based on SKS-30 and SKN-26). Orig. art. has:
2 tables, 3 figures and 2 formulas.

SUB CODE: 07, 11/ SUBM DATE: 17May65/ ORIG REF: 004/ OTH REF: 001

Card 2/2

SPEKTOROV, K. S.; LIN'KOVA, Ye. A.

On a new simplified method of synchronizing chlorella cultures.
Dokl. AN SSSR 147 no.4:967-969 D '62.   (MIRA 16:1)

1. Institut fiziologii rasteniy im. K. A. Timiryazeva AN SSSR.
Predstavleno akademikom A. L. Kursanovym.

(Chlorella)
(Algae—Cultures and culture media)

SPEKTOROV, K.S.; LIN'KOVA, Ye.A.

Effect of light intensity and temperature on the growth and development of a synchronous culture of Chlorella pyrenoidosa Pringsh. 82. Fiziol. rast. 10 no.6:667-672 N-D '63.   (MIRA 17:1)

1. K.A. Timiriazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow.